

**The Knowledge Bank at The Ohio State University**  
**Ohio State Engineer**

**Title:** Back Matter

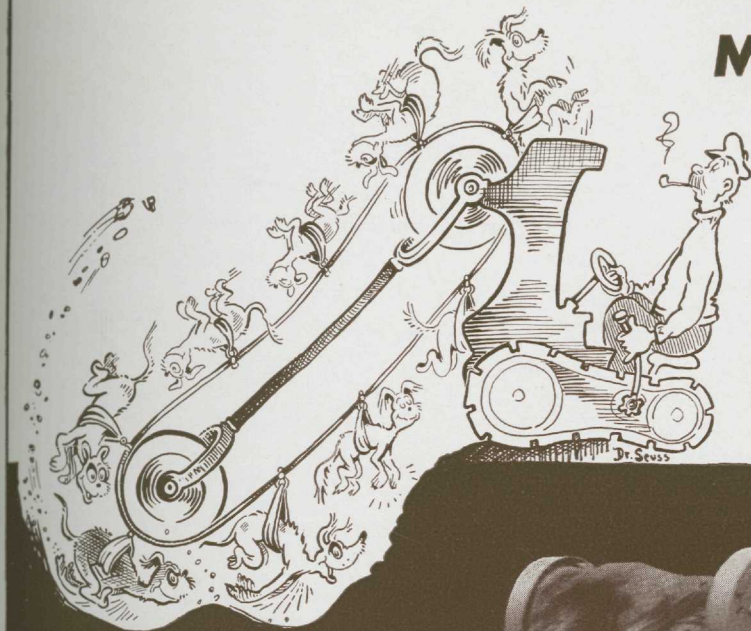
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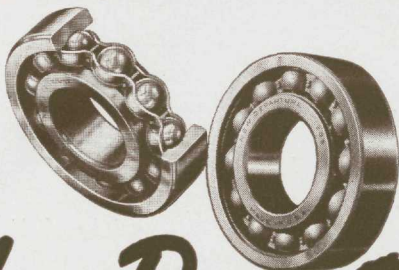
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# MECHANIZATION GETS IN THE GROOVE



• Our "guest artist," Dr. Seuss, has caricatured the remarkable machine which digs ditches for pipe lines or for Army trenches.

This machine is shown operating through ten inches of frost. In it, 67 New Departure ball bearings, many of them self-sealed to keep dirt out and lubricant in, assure long life, maximum power for digging and extremely low maintenance.



Since war is now highly mechanized, all vital moving parts of these machines must revolve or reciprocate on anti-friction bearings.

That's why New Departure is concentrating its great manufacturing facilities, the greatest ball bearing plant in the world, *all-out for defense!*

New Departure, a division of General Motors, Bristol, Connecticut. Detroit, Chicago, San Francisco, Los Angeles.

**New Departure**  
**THE FORGED STEEL BEARING**



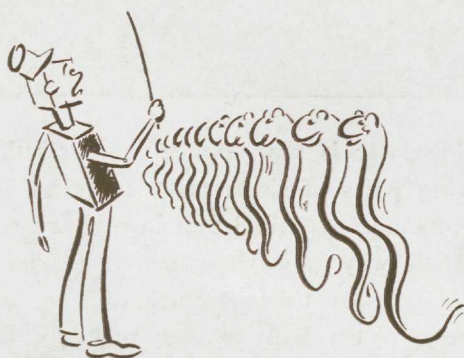
# G-E Campus News



## BLACKOUT WATCHMAN

THE problem of maintaining a night light in his place of business and at the same time complying with blackout regulations was solved by a Schenectady machine-shop owner by means of a G-E photo tube, or "electric eye." Rules required that all lights be extinguished within five minutes of an air-raid warning. That meant either hiring a watchman or turning out all lights at closing time.

The first night that the lights were turned out, the shop was broken into. So the owner, Andrew Tessier, put the "electric eye" to work. He installed the tube in an upstairs window, pointing at the nearest street light. When, during a practice blackout or raid warning, the street light is extinguished, the tube immediately turns out all lights in the shop. When the street lights go on again, so do the night lights. The "eye" provides a watchman who doesn't go to sleep on his job, and whose total cost is about two weeks' pay for an actual watchman.



## MOLECULES MARCH!

WITH the increasing use of plastics and of artificial silk and rubber in defense activities, the structural qualities of the molecules that make up these materials is

all-important to the scientists who are doing the research work.

Dr. Raymond M. Fuoss, of the General Electric Research Laboratory, in Schenectady, has found that some molecules wiggle like worms when an alternating electric field is applied to them. Such molecules are electrically lopsided, and when in an electric field they tend to line up, just as compass needles line up with the magnetic field of the earth.

From this tendency of the molecules to move to and fro in an electric field, scientists are able to determine how the various molecules are built. With this information, new molecules can be designed to meet specific needs. Since artificial silk and rubber and many plastics are composed of these worm-like molecules which react in an electrical field, materials of a wide variety of properties may be expected as a result of these researches.



## NOT FOR WILLIE—

THE General Electric Company is proud of the variety of services it renders its customers. Nevertheless, company officials were surprised by one recent request from a woman who had seen a G-E advertisement in a magazine.

The illustration in the advertisement contained a picture of a young boy. The woman also had a boy, and her boy looked very much like the boy in the photograph.

Mother and son had only recently moved to New York. Since then, she had taken her son to a number of different barbers, but none of them had produced a haircut that suited her. And so, in desperation, she wrote to General Electric to find where the boy in the advertisement had his hair cut. It was just the type of cut she had vainly tried to get.

**GENERAL**  **ELECTRIC**

953-84-211

*not at Baker Hall*

CAMPUS  
BAKER HALL  
RAY WILLIAM CLARK